

ESHB 1062 - S COMM AMD

By Committee on Water, Energy & Environment

ADOPTED 04/06/2005

1 Strike everything after the enacting clause and insert the
2 following:

3 "NEW SECTION. **Sec. 1.** The legislature finds that:

4 (1) According to estimates of the department of community, trade,
5 and economic development, the efficiency standards set forth in this
6 act will save nine hundred thousand megawatt-hours of electricity,
7 thirteen million therms of natural gas, and one billion seven hundred
8 million gallons of water in the year 2020, fourteen years after the
9 standards have become effective, with a total net present value to
10 buyers of four hundred ninety million dollars in 2020.

11 (2) Efficiency standards for certain products sold or installed in
12 the state assure consumers and businesses that such products meet
13 minimum efficiency performance levels thus saving money on utility
14 bills.

15 (3) Efficiency standards save energy and reduce pollution and other
16 environmental impacts associated with the production, distribution, and
17 use of electricity and natural gas.

18 (4) Efficiency standards contribute to the economy of Washington by
19 helping to better balance energy supply and demand, thus reducing
20 pressure for higher natural gas and electricity prices. By saving
21 consumers and businesses money on energy bills, efficiency standards
22 help the state and local economy, since energy bill savings can be
23 spent on local goods and services.

24 (5) Efficiency standards can make electricity systems more reliable
25 by reducing the strain on the electricity grid during peak demand
26 periods. Furthermore, improved energy efficiency can reduce or delay
27 the need for new power plants, power transmission lines, and power
28 distribution system upgrades.

1 NEW SECTION. **Sec. 2.** The definitions in this section apply
2 throughout this chapter unless the context clearly requires otherwise.

3 (1) "Automatic commercial ice cube machine" means a factory-made
4 assembly, not necessarily shipped in one package, consisting of a
5 condensing unit and ice-making section operating as an integrated unit
6 with means for making and harvesting ice cubes. It may also include
7 integrated components for storing or dispensing ice, or both.

8 (2) "Ballast" means a device used with an electric discharge lamp
9 to obtain necessary circuit conditions, such as voltage, current, and
10 waveform, for starting and operating the lamp.

11 (3) "Commercial clothes washer" means a soft mount horizontal or
12 vertical-axis clothes washer that: (a) Has a clothes container
13 compartment no greater than 3.5 cubic feet in the case of a horizontal-
14 axis product or no greater than 4.0 cubic feet in the case of a
15 vertical-axis product; and (b) is designed for use by more than one
16 household, such as in multifamily housing, apartments, or coin
17 laundries.

18 (4) "Commercial prerinse spray valve" means a handheld device
19 designed and marketed for use with commercial dishwashing and
20 warewashing equipment and that sprays water on dishes, flatware, and
21 other food service items for the purpose of removing food residue prior
22 to their cleaning.

23 (5)(a) "Commercial refrigerators and freezers" means refrigerators,
24 freezers, or refrigerator-freezers designed for use by commercial or
25 institutional facilities for the purpose of storing or merchandising
26 food products, beverages, or ice at specified temperatures that: (i)
27 Incorporate most components involved in the vapor-compression cycle and
28 the refrigerated compartment in a single cabinet; and (ii) may be
29 configured with either solid or transparent doors as a reach-in
30 cabinet, pass-through cabinet, roll-in cabinet, or roll-through
31 cabinet.

32 (b) "Commercial refrigerators and freezers" does not include: (i)
33 Products with 85 cubic feet or more of internal volume; (ii) walk-in
34 refrigerators or freezers; (iii) consumer products that are federally
35 regulated pursuant to 42 U.S.C. Sec. 6291 et seq.; (iv) products
36 without doors; or (v) freezers specifically designed for ice cream.

37 (6) "Compensation" means money or any other valuable thing,

1 regardless of form, received or to be received by a person for services
2 rendered.

3 (7) "Department" means the department of community, trade, and
4 economic development.

5 (8) "High-intensity discharge lamp" means a lamp in which light is
6 produced by the passage of an electric current through a vapor or gas,
7 and in which the light-producing arc is stabilized by bulb wall
8 temperature and the arc tube has a bulb wall loading in excess of three
9 watts per square centimeter.

10 (9) "Illuminated exit sign" means an internally illuminated sign
11 that is designed to be permanently fixed in place to identify a
12 building exit and consists of an electrically powered integral light
13 source that illuminates the legend "EXIT" and any directional
14 indicators and provides contrast between the legend, any directional
15 indicators, and the background.

16 (10)(a) "Low-voltage dry-type distribution transformer" means a
17 distribution transformer that: (i) Has an input voltage of 600 volts
18 or less; (ii) is air cooled; (iii) does not use oil as a coolant; and
19 (iv) is rated for operation at a frequency of 60 hertz.

20 (b) "Low-voltage dry-type transformer" does not include: (i)
21 Transformers with multiple voltage taps, with the highest voltage tap
22 equaling at least twenty percent more than the lowest voltage tap; or
23 (ii) transformers, such as those commonly known as drive transformers,
24 rectifier transformers, auto transformers, uninterruptible power system
25 transformers, impedance transformers, regulating transformers, sealed
26 and nonventilating transformers, machine tool transformers, welding
27 transformers, grounding transformers, or testing transformers, that are
28 designed to be used in a special purpose application and are unlikely
29 to be used in general purpose applications.

30 (11) "Metal halide lamp" means a high-intensity discharge lamp in
31 which the major portion of the light is produced by radiation of metal
32 halides and their products of dissociation, possibly in combination
33 with metallic vapors.

34 (12) "Metal halide lamp fixture" means a light fixture designed to
35 be operated with a metal halide lamp and a ballast for a metal halide
36 lamp.

37 (13) "Pass-through cabinet" means a commercial refrigerator or

1 freezer with hinged or sliding doors on both the front and rear of the
2 unit.

3 (14) "Probe-start metal halide ballast" means a ballast used to
4 operate metal halide lamps which does not contain an igniter and which
5 instead starts lamps by using a third starting electrode "probe" in the
6 arc tube.

7 (15) "Reach-in cabinet" means a commercial refrigerator or freezer
8 with hinged or sliding doors or lids, but does not include roll-in or
9 roll-through cabinets or pass-through cabinets.

10 (16)(a) "Roll-in cabinet" means a commercial refrigerator or
11 freezer with hinged or sliding doors that allow wheeled racks of
12 product to be rolled into the unit.

13 (b) "Roll-through cabinet" means a commercial refrigerator or
14 freezer with hinged or sliding doors on two sides of the cabinet that
15 allow wheeled racks of product to be rolled through the unit.

16 (17)(a) "Single-voltage external AC to DC power supply" means a
17 device that: (i) Is designed to convert line voltage alternating
18 current input into lower voltage direct current output; (ii) is able to
19 convert to only one DC output voltage at a time; (iii) is sold with, or
20 intended to be used with, a separate end-use product that constitutes
21 the primary power load; (iv) is contained within a separate physical
22 enclosure from the end-use product; (v) is connected to the end-use
23 product via a removable or hard-wired male/female electrical
24 connection, cable, cord, or other wiring; and (vi) has a nameplate
25 output power less than or equal to 250 watts.

26 (b) "Single-voltage external AC to DC power supply" does not
27 include: (i) Products with batteries or battery packs that physically
28 attach directly to the power supply unit; (ii) products with a battery
29 chemistry or type selector switch and indicator light; or (iii)
30 products with a battery chemistry or type selector switch and a state
31 of charge meter.

32 (18) "State-regulated incandescent reflector lamp" means a lamp
33 that is not colored or designed for rough or vibration service
34 applications, that has an inner reflective coating on the outer bulb to
35 direct the light, an E26 medium screw base, and a rated voltage or
36 voltage range that lies at least partially within 115 to 130 volts, and
37 that falls into one of the following categories:

1 (a) A bulged reflector or elliptical reflector bulb shape and which
2 has a diameter which equals or exceeds 2.25 inches;

3 (b) A reflector, parabolic aluminized reflector, or similar bulb
4 shape and which has a diameter of 2.25 to 2.75 inches.

5 (19) "Torchiere" means a portable electric lighting fixture with a
6 reflective bowl that directs light upward onto a ceiling so as to
7 produce indirect illumination on the surfaces below. "Torchiere" may
8 include downward directed lamps in addition to the upward, indirect
9 illumination.

10 (20) "Traffic signal module" means a standard (a) 8-inch or 200 mm
11 or (b) 12-inch or 300 mm traffic signal indication, consisting of a
12 light source, a lens, and all other parts necessary for operation.

13 (21) "Transformer" means a device consisting of two or more coils
14 of insulated wire and that is designed to transfer alternating current
15 by electromagnetic induction from one coil to another to change the
16 original voltage or current value.

17 (22)(a) "Unit heater" means a self-contained, vented fan-type
18 commercial space heater that uses natural gas or propane, and that is
19 designed to be installed without ducts within a heated space.

20 (b) "Unit heater" does not include any products covered by federal
21 standards established pursuant to 42 U.S.C. Sec. 6291 et seq. or any
22 product that is a direct vent, forced flue heater with a sealed
23 combustion burner.

24 NEW SECTION. **Sec. 3.** (1) This chapter applies to the following
25 types of new products sold, offered for sale, or installed in the
26 state: (a) Automatic commercial ice cube machines; (b) commercial
27 clothes washers; (c) commercial prerinse spray valves; (d) commercial
28 refrigerators and freezers; (e) illuminated exit signs; (f) low-voltage
29 dry-type distribution transformers; (g) metal halide lamp fixtures; (h)
30 single-voltage external AC to DC power supplies; (i) state-regulated
31 incandescent reflector lamps; (j) torchieres; (k) traffic signal
32 modules; and (l) unit heaters. This chapter applies equally to
33 products whether they are sold, offered for sale, or installed as a
34 stand-alone product or as a component of another product.

35 (2) This chapter does not apply to (a) new products manufactured in
36 the state and sold outside the state, (b) new products manufactured
37 outside the state and sold at wholesale inside the state for final

1 retail sale and installation outside the state, (c) products installed
 2 in mobile manufactured homes at the time of construction or (d)
 3 products designed expressly for installation and use in recreational
 4 vehicles.

5 NEW SECTION. **Sec. 4.** The legislature establishes the following
 6 minimum efficiency standards for the types of new products set forth in
 7 section 3 of this act.

8 (1)(a) Automatic commercial ice cube machines must have daily
 9 energy use and daily water use no greater than the applicable values in
 10 the following table:

Equipment type	Type of cooling	Harvest rate (lbs. ice/24 hrs.)	Maximum energy use (kWh/100 lbs.)	Maximum condenser water use (gallons/100 lbs. ice)
Ice-making head	water	<500	7.80 - .0055H	200 - .022H
		>=500<1436	5.58 - .0011H	200 - .022H
		>=1436	4.0	200 - .022H
Ice-making head	air	450	10.26 - .0086H	Not applicable
		>=450	6.89 - .0011H	Not applicable
Remote condensing but not remote compressor	air	<1000	8.85 - .0038	Not applicable
		>=1000	5.10	Not applicable
Remote condensing and remote compressor	air	<934	8.85 - .0038H	Not applicable
		>=934	5.3	Not applicable
Self-contained models	water	<200	11.40 - .0190H	191 - .0315H
		>=200	7.60	191 - .0315H
Self-contained models	air	<175	18.0 - .0469H	Not applicable
		>=175	9.80	Not applicable

27 Where H = harvest rate in pounds per twenty-four hours which must be reported within 5% of the tested value.

28 "Maximum water use" applies only to water used for the condenser.

29 (b) For purposes of this section, automatic commercial ice cube
 30 machines shall be tested in accordance with ARI 810-2003 test method as
 31 published by the air-conditioning and refrigeration institute. Ice-
 32 making heads include all automatic commercial ice cube machines that
 33 are not split system ice makers or self-contained models as defined in
 34 ARI 810-2003.

(2) Commercial clothes washers must have a minimum modified energy factor of 1.26. For the purposes of this section, capacity and modified energy factor are defined and measured in accordance with the current federal test method for clothes washers as found at 10 C.F.R. Sec. 430.23.

(3) Commercial prerinse spray valves must have a flow rate equal to or less than 1.6 gallons per minute when measured in accordance with the American society for testing and materials' "Standard Test Method for Prerinse Spray Valves," ASTM F2324-03.

(4)(a) Commercial refrigerators and freezers must meet the applicable requirements listed in the following table:

Equipment Type	Doors	Maximum Daily Energy Consumption (kWh)
Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are refrigerators	Solid	$0.10V + 2.04$
	Transparent	$0.12V + 3.34$
Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are "pulldown" refrigerators	Transparent	$.126V + 3.51$
Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are freezers	Solid	$0.40V + 1.38$
	Transparent	$0.75V + 4.10$
Reach-in cabinets that are refrigerator-freezers with an AV of 5.19 or higher	Solid	$0.27AV - 0.71$

kWh = kilowatt hours

V = total volume (ft³)

AV = adjusted volume = [1.63 x freezer volume (ft³)] + refrigerator volume (ft³)

(b) For purposes of this section, "pulldown" designates products designed to take a fully stocked refrigerator with beverages at 90 degrees F and cool those beverages to a stable temperature of 38 degrees F within 12 hours or less. Daily energy consumption shall be measured in accordance with the American national standards institute/American society of heating, refrigerating and air-conditioning engineers test method 117-2002, except that the back-loading doors of pass-through and roll-through refrigerators and freezers must remain closed throughout the test, and except that the controls of all appliances must be adjusted to obtain the following product temperatures.

Product or compartment type	Integrated average product temperature in degrees Fahrenheit
Refrigerator	38 ± 2
Freezer	0 ± 2

(5) Illuminated exit signs must have an input power demand of five watts or less per illuminated face. For the purposes of this section, input power demand is measured in accordance with the United States environmental protection agency's energy star exit sign program's conditions for testing, version 3.0. Illuminated exit signs must meet all applicable building and safety codes.

(6)(a) Low-voltage dry-type distribution transformers shall have efficiencies not less than the applicable values in the following table when tested at thirty-five percent of the rated output power:

Single Phase			Three Phase		
Rated power output in kVa	Minimum efficiency %		Rated power output in kVa	Minimum efficiency %	
≥ 15	<25	97.7	≥ 15	<30	97.0
≥ 25	<37.5	98.0	≥ 30	<45	97.5
≥ 37.5	<50	98.2	≥ 45	<75	97.7
≥ 50	<75	98.3	≥ 75	<112.5	98.0
≥ 75	<100	98.5	≥ 112.5	<150	98.2
≥ 100	<167	98.6	≥ 150	<225	98.3
≥ 167	<250	98.7	≥ 225	<300	98.5
≥ 250	<333	98.8	≥ 300	<500	98.6
333		98.9	≥ 500	<750	98.7
--		--	≥ 750	<1000	98.8
--		--	1000		98.9

kVa = kilovolt amperes

(b) For the purposes of this section, low-voltage dry-type distribution transformer efficiency is measured in accordance with the national electrical manufacturers association TP 2-1998 test method.

(7) Metal halide lamp fixtures designed to be operated with lamps rated greater than or equal to 150 watts but less than or equal to 500 watts shall not contain a probe-start metal halide lamp ballast.

1 (8)(a) Single-voltage external AC to DC power supplies shall meet
 2 the requirements in the following table:

Nameplate output	Minimum Efficiency in Active Mode
< 1 Watt	0.49 * Nameplate Output
> or = 1 Watt and < or = 49 Watts	0.09 * Ln (Nameplate Output) + 0.49
> 49 Watts	0.84
	Maximum Energy Consumption in No-Load Mode
< 10 Watts	0.5 Watts
> or = 10 Watts and < or = 250 Watts	0.75 Watts

10 Where Ln (Nameplate Output) - Natural Logarithm of the nameplate output expressed in Watts

11 (b) For the purposes of this section, efficiency of single-voltage
 12 external AC to DC power supplies shall be measured in accordance with
 13 the United States environmental protection agency's "Test Method for
 14 Calculating the Energy Efficiency of Single-Voltage External AC to DC
 15 and AC to AC Power Supplies", by Ecos Consulting and Power Electronics
 16 Application Center, dated August 11, 2004.

17 (9)(a) State-regulated incandescent reflector lamps that are not 50
 18 watt elliptical reflector lamps must meet the minimum efficacies in the
 19 following table:

Wattage	Minimum average lamp efficacy (lumens per watt)
40 - 50	10.5
51 - 66	11.0
67 - 85	12.5
86 - 115	14.0
116 - 155	14.5
156 - 205	15.0

27 (b) Lamp efficacy must be measured in accordance with the
 28 applicable federal test method as found at 10 C.F.R. Sec. 430.23.

29 (10) Torchieres may not use more than 190 watts. A torchiere is
 30 deemed to use more than 190 watts if any commercially available lamp or
 31 combination of lamps can be inserted in a socket and cause the
 32 torchiere to draw more than 190 watts when operated at full brightness.

33 (11)(a) Traffic signal modules must have maximum and nominal

1 wattage that do not exceed the applicable values in the following
2 table:

3 Module Type	Maximum Wattage (at 74°C)	Nominal Wattage (at 25°C)
4 12" red ball (or 300 mm circular)	17	11
5 8" red ball (or 200 mm circular)	13	8
6 12" red arrow (or 300 mm arrow)	12	9
7		
8 12" green ball (or 300 mm circular)	15	15
9 8" green ball (or 200 mm circular)	12	12
10 12" green arrow (or 300 mm arrow)	11	11

11 mm = millimeter

12 (b) For the purposes of this section, maximum wattage and nominal
13 wattage must be measured in accordance with and under the testing
14 conditions specified by the institute for transportation engineers
15 "Interim LED Purchase Specification, Vehicle Traffic Control Signal
16 Heads, Part 2: Light Emitting Diode Vehicle Traffic Signal Modules."

17 (12) Unit heaters must be equipped with intermittent ignition
18 devices and must have either power venting or an automatic flue damper.

19 NEW SECTION. **Sec. 5.** (1) On or after January 1, 2007, no new
20 commercial prerinse spray valve, commercial clothes washer, commercial
21 refrigerator or freezer, illuminated exit sign, low-voltage dry-type
22 distribution transformer, single-voltage external AC to DC power
23 supply, state-regulated incandescent reflector lamp, torchiere, traffic
24 signal module, or unit heater may be sold or offered for sale in the
25 state unless the efficiency of the new product meets or exceeds the
26 efficiency standards set forth in section 4 of this act. On or after
27 January 1, 2008, no new automatic commercial ice cube machine or metal
28 halide lamp fixtures may be sold or offered for sale in the state
29 unless the efficiency of the new product meets or exceeds the
30 efficiency standards set forth in section 4 of this act.

31 (2) On or after January 1, 2008, no new commercial prerinse spray
32 valve, commercial clothes washer, commercial refrigerator or freezer,
33 illuminated exit sign, low-voltage dry-type distribution transformer,
34 single-voltage external AC to DC power supply, state-regulated
35 incandescent reflector lamp, torchiere, traffic signal module, or unit

1 heater may be installed for compensation in the state unless the
2 efficiency of the new product meets or exceeds the efficiency standards
3 set forth in section 4 of this act. On or after January 1, 2009, no
4 new automatic commercial ice cube machine or metal halide lamp fixtures
5 may be installed for compensation in the state unless the efficiency of
6 the new product meets or exceeds the efficiency standards set forth in
7 section 4 of this act.

8 (3) Standards for metal halide lamp fixtures and state-regulated
9 incandescent reflector lamps are effective on the dates in subsections
10 (1) and (2) of this section.

11 NEW SECTION. **Sec. 6.** The department may recommend updates to the
12 energy efficiency standards and test methods for products listed in
13 section 3 of this act. The department may also recommend establishing
14 state standards for additional nonfederally covered products. In
15 making its recommendations, the department shall use the following
16 criteria: (1) Multiple manufacturers produce products that meet the
17 proposed standard at the time of recommendation, (2) products meeting
18 the proposed standard are available at the time of recommendation, (3)
19 the products are cost-effective to consumers on a life-cycle cost basis
20 using average Washington resource rates, (4) the utility of the energy
21 efficient product meets or exceeds the utility of the comparable
22 product available for purchase, and (5) the standard exists in at least
23 two other states in the United States. For recommendations concerning
24 commercial clothes washers, the department must also consider the
25 fiscal effects on the low-income, elderly, and student populations.
26 Any recommendations shall be transmitted to the appropriate committees
27 of the legislature sixty days before the start of any regular
28 legislative session.

29 NEW SECTION. **Sec. 7.** (1) The manufacturers of products covered by
30 this chapter must test samples of their products in accordance with the
31 test procedures under this chapter or those specified in the state
32 building code.

33 (2) Manufacturers of new products covered by section 3 of this act,
34 except for single-voltage external AC to DC power supplies, shall
35 certify to the department that the products are in compliance with this
36 chapter. This certification must be based on test results unless this

1 chapter does not specify a test method. The department shall establish
2 rules governing the certification of these products and may coordinate
3 with the certification programs of other states and federal agencies
4 with similar standards.

5 (3) Manufacturers of new products covered by section 3 of this act
6 shall identify each product offered for sale or installation in the
7 state as in compliance with this chapter by means of a mark, label, or
8 tag on the product and packaging at the time of sale or installation.
9 The department shall establish rules governing the identification of
10 these products and packaging, which shall be coordinated to the
11 greatest practical extent with the labeling programs of other states
12 and federal agencies with equivalent efficiency standards.

13 (4) The department may test products covered by section 3 of this
14 act. If products so tested are found not to be in compliance with the
15 minimum efficiency standards established under section 4 of this act,
16 the department shall: (a) Charge the manufacturer of the product for
17 the cost of product purchase and testing; and (b) make information
18 available to the public on products found not to be in compliance with
19 the standards.

20 (5) The department shall obtain in paper form the test methods
21 specified in section 4 of this act, which shall be available for public
22 use at the department's energy policy offices.

23 (6) The department shall investigate complaints received concerning
24 violations of this chapter. Any manufacturer or distributor who
25 violates this chapter shall be issued a warning by the director of the
26 department for any first violation. Repeat violations are subject to
27 a civil penalty of not more than two hundred fifty dollars a day.
28 Penalties assessed under this subsection are in addition to costs
29 assessed under subsection (4) of this section.

30 (7) The department may adopt rules as necessary to ensure the
31 proper implementation and enforcement of this chapter.

32 (8) The proceedings relating to this chapter are governed by the
33 administrative procedure act, chapter 34.05 RCW.

34 NEW SECTION. **Sec. 8.** If any provision of this act or its
35 application to any person or circumstance is held invalid, the
36 remainder of the act or the application of the provision to other
37 persons or circumstances is not affected.

1 NEW SECTION. **Sec. 9.** Sections 1 through 8 of this act constitute
2 a new chapter in Title 19 RCW."

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By Committee on Water, Energy & Environment

ADOPTED 04/06/2005

3 On page 1, line 1 of the title, after "efficiency;" strike the
4 remainder of the title and insert "adding a new chapter to Title 19
5 RCW; and prescribing penalties."

--- END ---